

### **REMARKS/ARGUMENTS**

Claims 13-18, 24-27 and 29-44 were previously withdrawn in response to the Restriction Requirement of January 24, 2007. Currently pending claims 1-12, 19-23 and 28 are hereby canceled and new claims 45-52 added.

New claims 45-52 are drawn to polynucleotides having the specific sequence of SEQ ID NO:1, polynucleotides encoding a polypeptide having the specific sequence of SEQ ID NO:2, and genetic constructs and vectors containing these polynucleotides. Support for the new claims can be found in claims 7, 12, 19-23 and 28 of the published application and throughout the specification.

#### Claim Objections

In the Office Action, the Examiner objected to claim 3 for containing an abbreviation without indicating what the abbreviation stands for. The Examiner also objected to claim 20 for depending on a claim withdrawn from examination. Claims 3 and 20 are hereby canceled and none of the remaining claims contain the abbreviation or depend from a withdrawn claim. Accordingly, these objections should be withdrawn.

The Examiner also objected to claim 7 as being dependent upon a rejected base claim, but stated that claim 7 would be allowable if written in independent form including all of the limitations of the base claim and intervening claims. Claim 7 is canceled. New independent claim 45 corresponds to claim 7 and is believed to be allowable.

#### Claim Rejections – 35 USC 112

The Examiner rejected claims 1-6, 8-12, 19-23 and 28 under 35 USC 112, first paragraph, for failing to comply with the written description requirement. The Examiner asserted that the specification does not provide sufficient description of the entire genus of polynucleotides encoding a polypeptide having Germacrene D synthase activity as encompassed by the claims. Aside from SEQ ID NO:1, the Examiner stated that one skilled in the art would not recognize that the Applicant was in possession of the broad genus at the time the application was filed.

Similarly, the Examiner also rejected the claims under 35 USC 112 for lack of enablement. The Examiner stated that while the description is enabling for a polynucleotide of

SEQ ID NO:1 encoding the polypeptide of SEQ ID NO:2, the description fails to provide enablement to the enormous genus of fragments and variants of the polynucleotide of SEQ ID NO:1 as encompassed by the claims.

In the interest of advancing prosecution, Applicant hereby cancels claims 1-12, 19-23 and 28 and adds new claims 45-52. The new claims are limited to polynucleotides having the specific sequence of SEQ ID NO:1 and polynucleotides encoding a polypeptide having the specific amino acid sequence of SEQ ID NO:2.

Claim 45 recites an isolated polynucleotide encoding a multifunctional germacrene-D synthase, wherein the specific nucleotide sequence is that of SEQ ID NO:1. This claim does not encompass previously claimed polynucleotide fragments and variants of SEQ ID NO:1. A polynucleotide having the sequence of SEQ ID NO:1 which encodes a polypeptide having germacrene-D synthase activity is described in the specification (for example, pages 28-31). Thus one skilled in the art would recognize this claim as being enabled and in the possession of the Applicant at the time of filing. Accordingly, it is believed that this claim should be allowed.

Claim 46 is drawn to a genetic construct comprising the polynucleotide of claim 45, and claim 47 is drawn to vector comprising the genetic construct of claim 46. Both of these claims depend from claim 45 and should be allowed if claim 45 is allowed.

Claim 48 recites an isolated polynucleotide encoding a multifunctional germacrene-D synthase, wherein the synthase polypeptide has the amino acid sequence of SEQ ID NO:2. The amino acid sequence of SEQ ID NO:2 is clearly disclosed in the specification. While multiple polynucleotides can encode the polypeptide of SEQ ID NO:2 due to degeneracy of the nucleic acid code (for example, both AAA and AAG can code for lysine) this is well known and accepted in the art. One skilled in the art would recognize the polynucleotides able to encode the polypeptide of SEQ ID NO:2 as being enabled and in the possession of the Applicant at the time of filing. This claim does not encompass polypeptide analogues which do not have the amino acid sequence of SEQ ID NO:2. Accordingly, it is believed that this claim should be allowed.

Claims 49-51 are drawn to genetic constructs comprising the polynucleotide of claim 48. Claim 52 recites a vector comprising the genetic construct of claim 49. These claims depend from claim 48 and should be allowed if claim 48 is allowed.

It is believed the new claims address the Examiner's concerns regarding written description and enablement. Accordingly, the rejections under 35 USC 112, first paragraph, should be withdrawn and claims 45-52 should be allowed.

#### Conclusion

In view of the foregoing, it is submitted that this case is in condition for allowance, and passage to issuance is respectfully requested. If there are further issues related to patentability, the courtesy of a telephone interview is requested, and the Examiner is invited to call to arrange a mutually convenient time.

This amendment is accompanied by a Petition for Extension of Time (one month) and payment in the amount of \$120.00 as required under 37 C.F.R. 1.17. If the amount submitted is incorrect, however, please deduct from Deposit Account No. 07-1969 the appropriate fee for this submission and any extension of time required.

Respectfully submitted,  
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